Atalanta (December 1992) **23**(3/4):499-517, Würzburg, ISSN 0171-0079

An annotated checklist of the Lasiocampidae of the Russian Far East

(Lepidoptera)

by

VADIM V. ZOLOTUHIN

received 2.IV.1992

Summary: 28 species of Lasiocampidae are listed for the Russian Far East. 2 Species – *Dendrolimus spectabilis* BUTL. and *Bhima undulosa* WLK. are suspected to be false recordings. *Poecilocampa tenera* O. BANG-HAAS and *P. tamanukii* MATS. are regarded as good species. Some taxa are synonymized: *Eriogaster senecta* GRAES. to *E. lanestris* L., *Phyllodesma japonicum sakhalinensis* LAJ. to *Ph. j. japonicum* LEECH, and *Ph. j. amurensis* LAJ. to *Ph. j. ussuriensis* LAJ.

В. В. Золотухин: Список видов коконопрядов (Lepidoptera, Lasiocampidae) Дальнего Востока России.

Резюме: Для территории Дальнего Востока России приводятся 28 видов коконопрядов. 2 вида *Dendrolimus spectabilis* BUTL. и *Bhima undolosa* WLK. - исключются из списка как маловероятные. *Poecilocampa tenera* OBTH. и *P. tamanukii* MATS. рассматриваются как хорошие виды. Синонимизируются: *Eriogaster senecta* GRAES. к *E. lanestris* L.; *Phyllodesma japonicum sakhalinensis* LAJ. к *Ph. j. japonicum* LEECH; *Ph. j. amurensis* LAJ. к *Ph. j. ussuriensis* LAJ.

This article is the second one of a planned series of five papers dealing with the distribution of Lasiocampidae (lappet moths) in the territory of the former USSR (ZOLOTUHIN, 1992). The main data base for this paper are the collections of the biggest zoological Museums such as St. Petersburg/Leningrad Zoological Institute, Novosibirsk Biological Institute, Vladivostok Biology & Soil Institute, Moscow and Kiev Universities and many private collections. Some type specimens needed for more accurate definition of the status of some taxa and kept in the collection of the Zoologisches Museum der Humboldt-Universität (Berlin) could be studied due to the courtesy of Dr. W. MEY and Dr. V. LUKHTANOV. I am very thankful to them for their help in my work.

It is most convenient and generally accepted to understand by the term "Far East" the region east of Jakutia and Chita Region (see "Keys to the determination of the Insects of the Far East of the USSR" – Leningrad, 1986-1990). In some cases we slightly enlarged the areas shown by the maps for demonstration of species range. The territories of China, Korea and Japan were not included in the mapping because of the fragmental data from these countries and because it was not the aim of this article.

It is necessary to remark, that the species composition of Lasiocampidae within the region under consideration should be completely known, especially in the southern part of the Far

East (Primorie). There is no sense to enumerate all the papers dealing with lappet-moths from the Far East, but some of them are worthy of special attention. First of all there are the papers of TSCHISTJAKOV (1981), TSCHISTJAKOV & BELJAEV (1984) and also the work of KURENTZOV (1938). The last one, however, is largely based on the careful data given by GRAESER (1888). These are the articles that cleared the "white spots" in the study of Far East Lasiocampidae and, together with my own data placed in the following list, are suggested to your attention.

Note: letters "B", "M", "E" heading the Roman numerals refer to beginning, middle, and end of the month.

Poecilocampinae

1. *Poecilocampa populi populi* LINNAEUS, 1758

Range (R) Single finds in Amur region.
Foodplants (FP) *Quercus, Tilia, Populus, Salix, Ulmus, Betula, Alnus, Malus.*
Adult (A) M IX-B XI. Eggs hibernate.
Comments (C) Strong bending of the inner medial band to the forewing basis, clearly distinguishing brown basal spot and yellow irregular toothed bands well differ this species from other *Poecilocampa*.

2. *Poecilocampa tenera* O. BANG-HAAS, 1927

R (Map 1) Primorie.
FP *Quercus, Betula.*
A M IX-X. Eggs hibernate.
C Differs well from *P. populi* by the absence of the brown basal spot, white median bands of the forewings and smaller size.

3. *Poecilocampa tamanukii* MATSUMURA, 1928

R (Map 1) Southern Sakhalin.
FP unknown.
A X. Eggs hibernate.
C Largest of *Poecilocampa* insular species. Differs well in the regular toothed white medial bands of the forewings and in the structure of the genitalia.

4. *Trichiura crataegi crataegi* LINNAEUS, 1758

R (Map 2) Central Jakutia south to Amur region.
FP *Crataegus, Prunus, Malus, Salix, Betula, Quercus.*
A VIII-IX. Eggs hibernate.

Malacosomatinae

5. *Malacosoma neustrium testaceum* MOTSCHULSKY, 1866

R (Map 2) Amur region and Primorie, southern Sakhalin.
FP *Malus, Padus, Prunus, Rosa, Quercus, Betula, Corylus, Tilia, Salix, Populus, Lespedeza.* KIRPICHNIKOVA (1966) notes that during an outbreak 1964 "this pest had deprived the foodplants and hat to turn to *Solanum, Brassica, Daucus, Glycine* and along the rivers - from *Salix* to *Carex*"
A E VI-M VIII. Formed larvae hibernate within the egg-shell.
C This geographically limited subspecies differs from *M. n. neustrium* in light yellow wings of males and details of genitalia.

Lasiocampinae

6. *Eriogaster lanestris* LINNAEUS, 1758

R (Map 3) Primorie and Jakutia.
FP *Betula, Tilia, Salix, Crataegus, Prunus, Malus.*
A IV-V. Formed imagines within pupa or pupae hibernate.
C We consider *E. senecta* GRAESER, described from the Far East, only as a form of *E. lanestris*.

7. *Amurilla subpurpurea dieckmanni* GRAESER, 1888

R (Map 4) Amur region, Primorie and southern Sakhalin.
FP *Sorbus, Padus.*
A E VI-M VIII. Larvae of middle instars or pupae hibernate.

8. *Macrothylacia rubi* LINNAEUS, 1758

R (Map 3) Local in Amur region.
FP *Fragaria, Potentilla, Rubus, Trifolium, Plantago, Rumex, Veronica.*
A V-VI. Larvae hibernate ready to pupate.

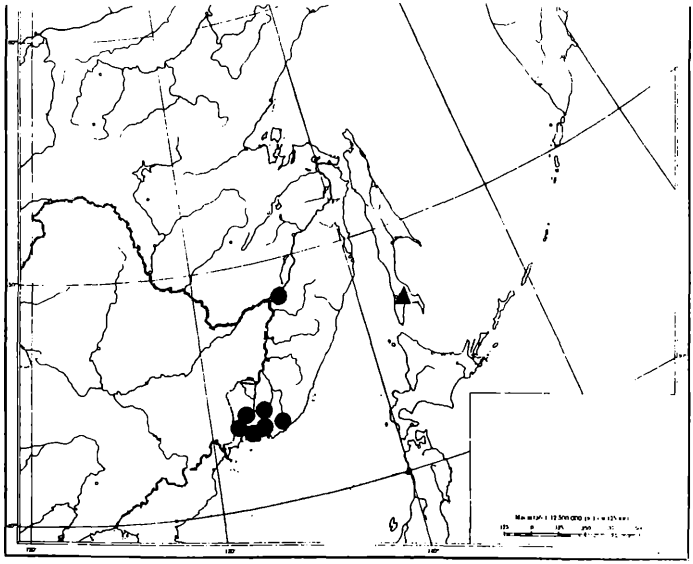
Gastropachinae

9a. *Euthrix potatoria potatoria* LINNAEUS, 1758

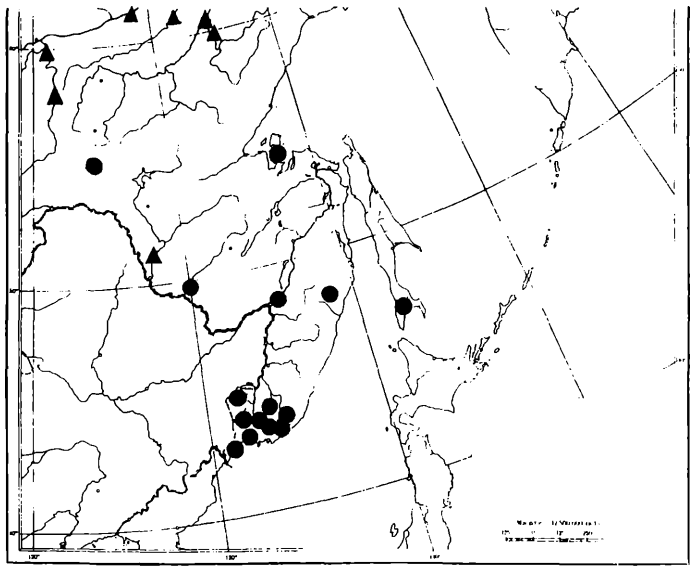
R (Map 5) Amur and Khabarovsk regions.
FP Poaceae.
A VII-M VIII. Larvae of middle instars hibernate.
C All subspecies of *E. potatoria* differ from each other only in the male genitalia; they are all very variable in colour.

9b. *Euthrix potatoria ascoldensis* OBERTHÜR, 1880

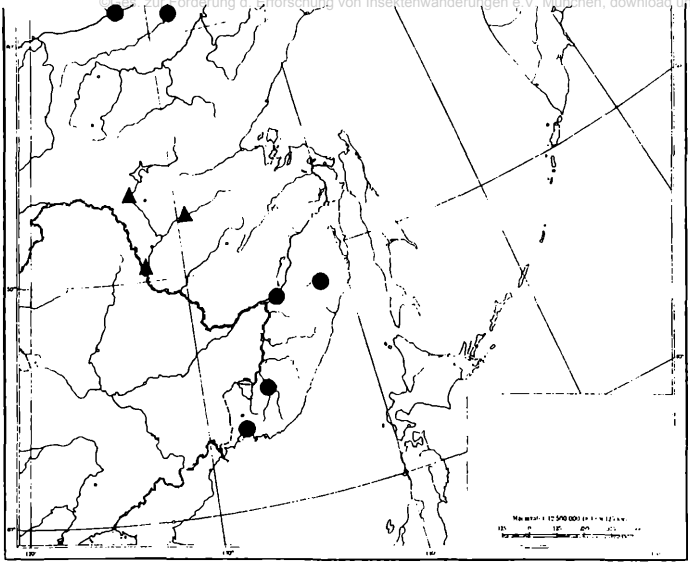
R (Map 5) Primorie.



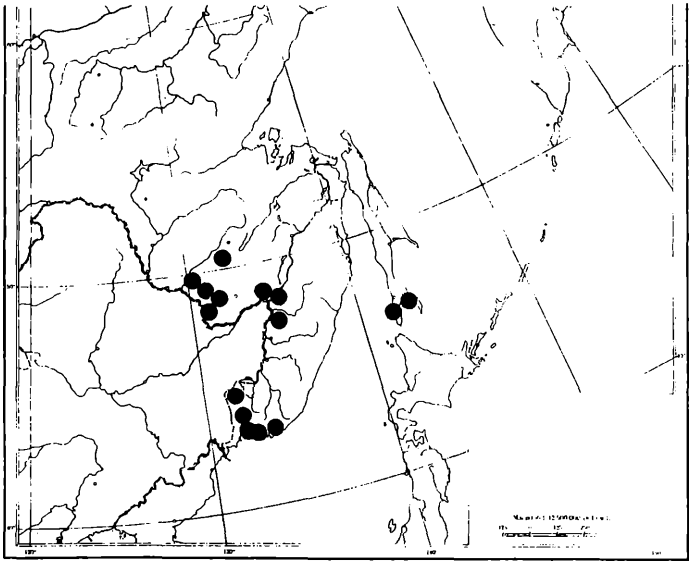
Map 1: *P. tenera* (●), *P. tamanukii* (▲)



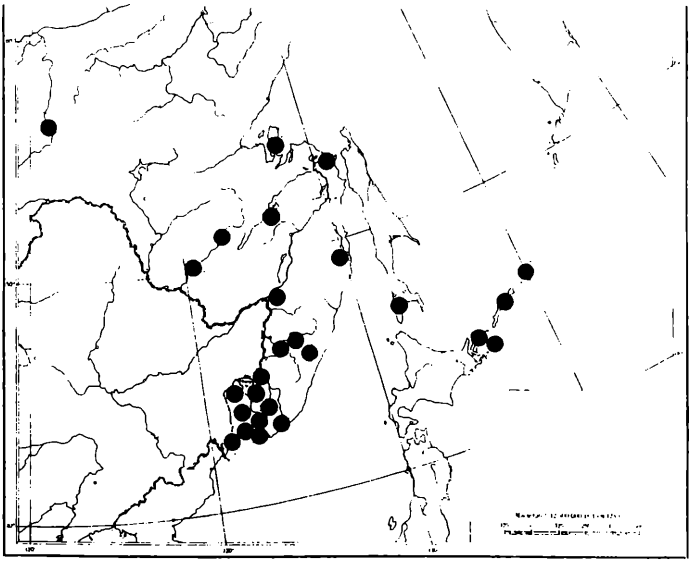
Map 2: *M. neustrium* (●), *T. crataegi* (▲)



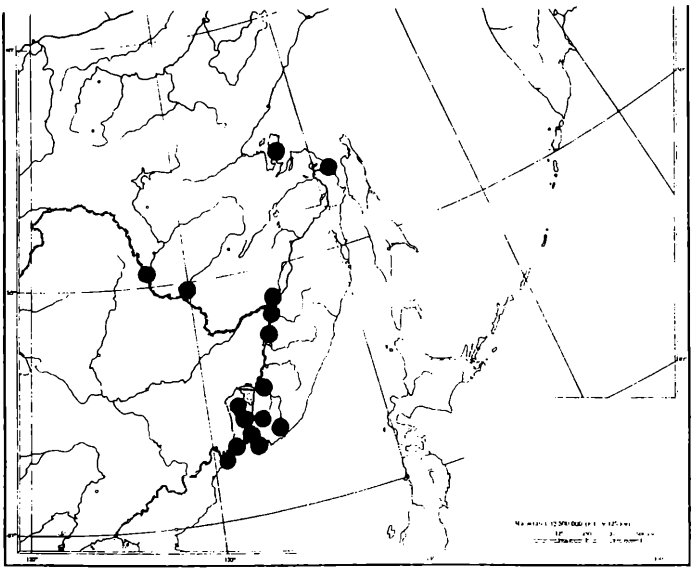
Map 3: *E. lanestris* (●), *M. rubi* (▲)



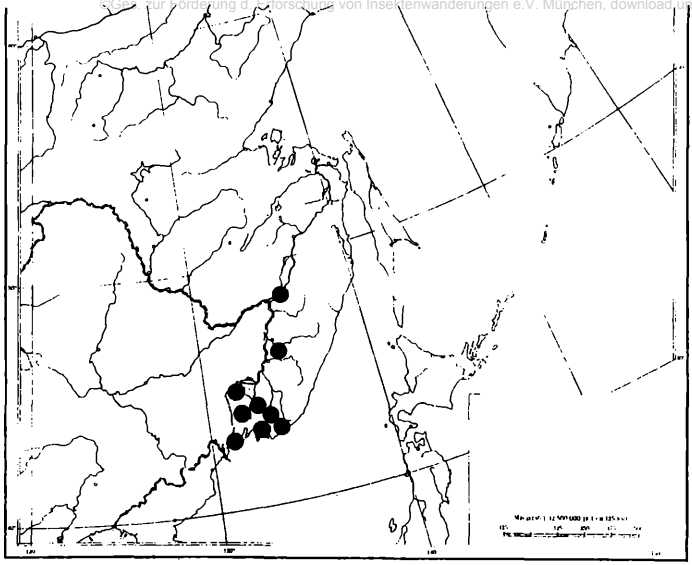
Map 4: *A. subpurpurea*



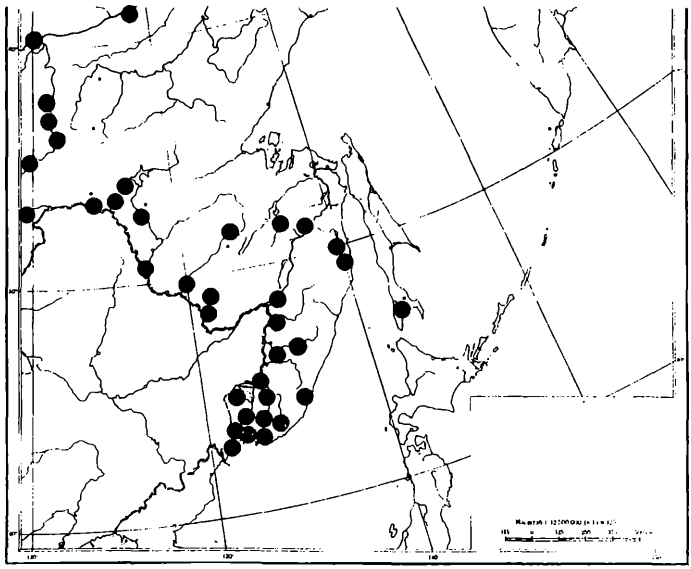
Map 5: *E. potatoria*



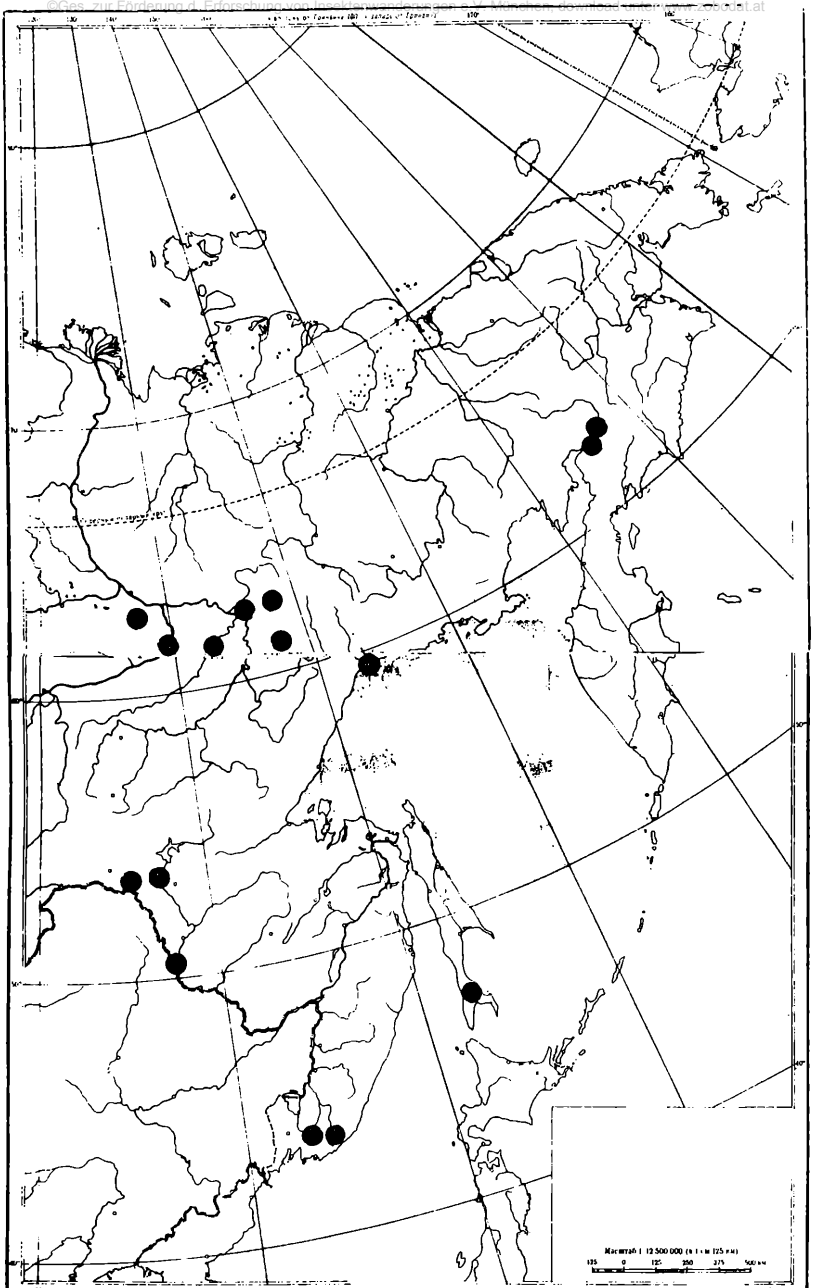
Map 6: *E. albomaculata*



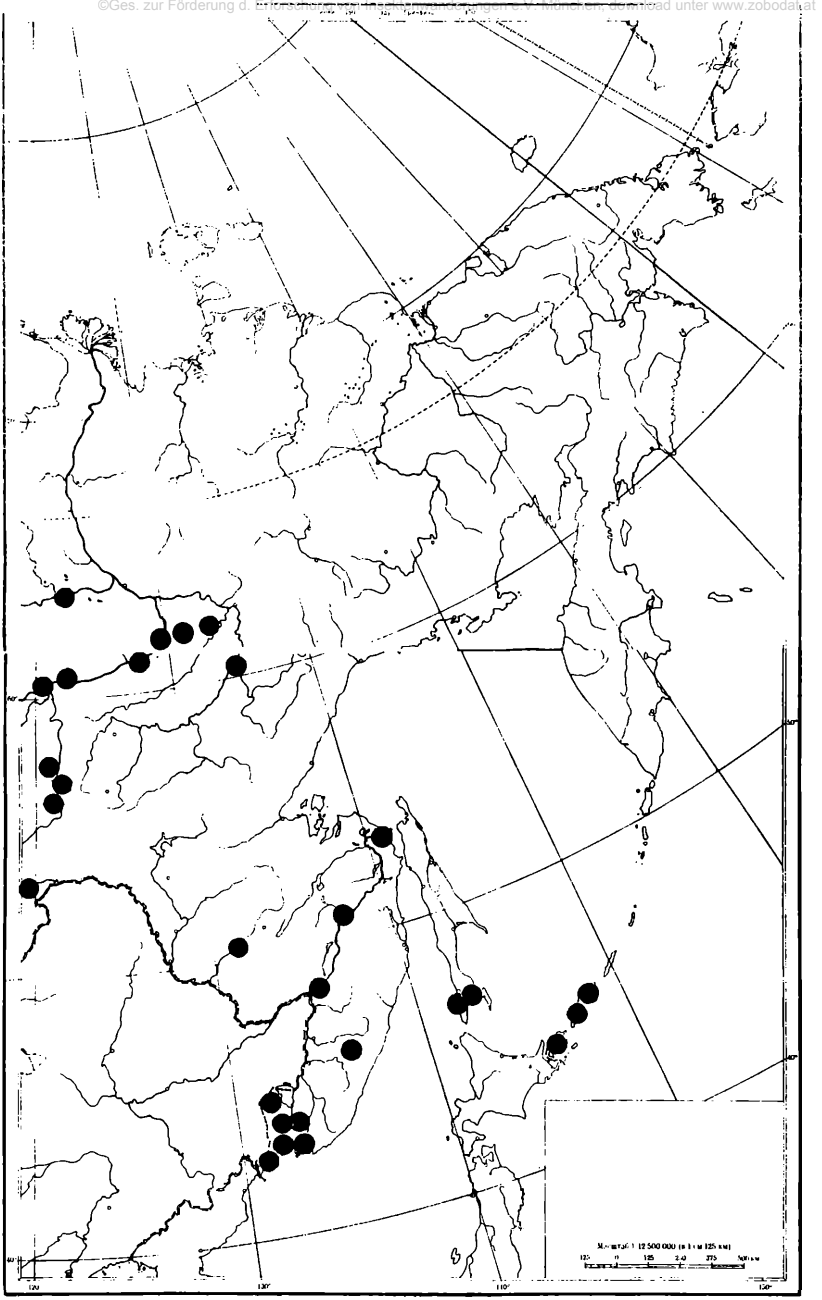
Map 7: *E. laeta*



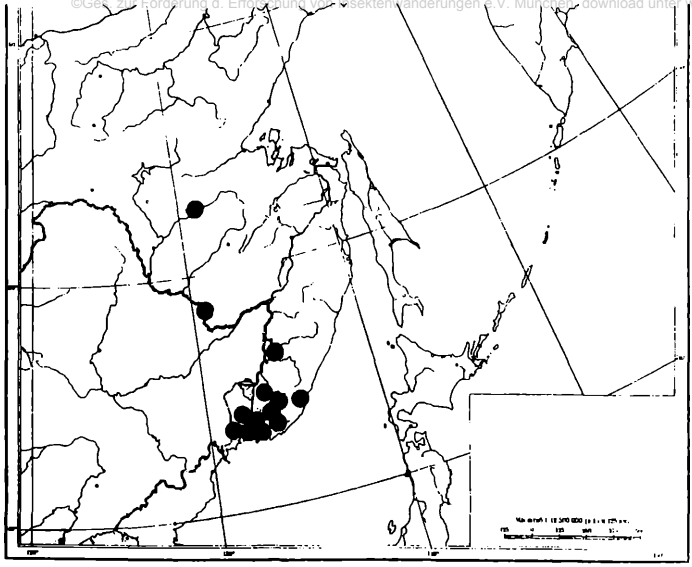
Map 8: *G. quercifolia*



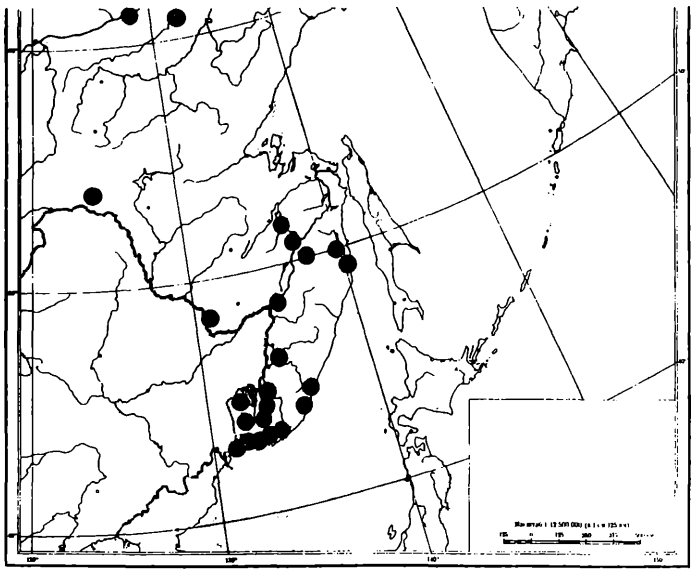
Map 9: *C. lunigera*



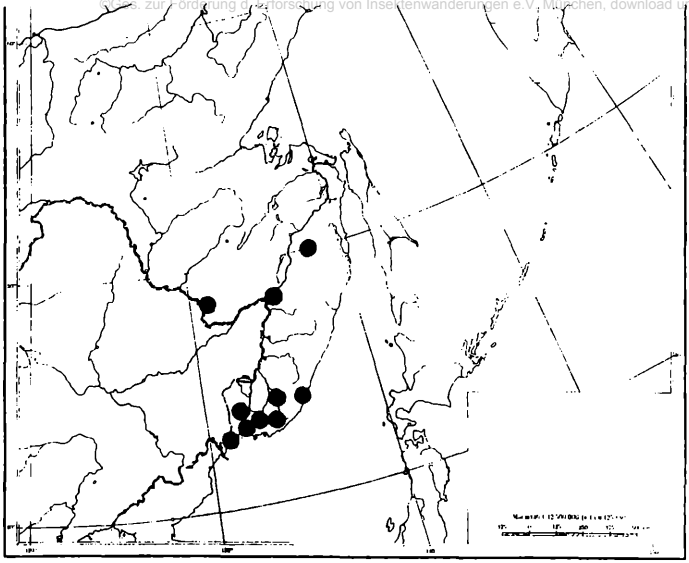
Map 10: *D. superans*



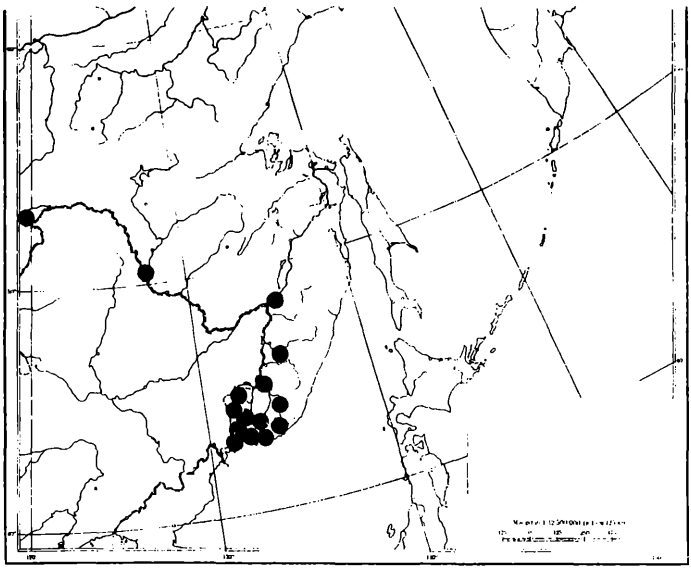
Map 11: *G. orientalis*



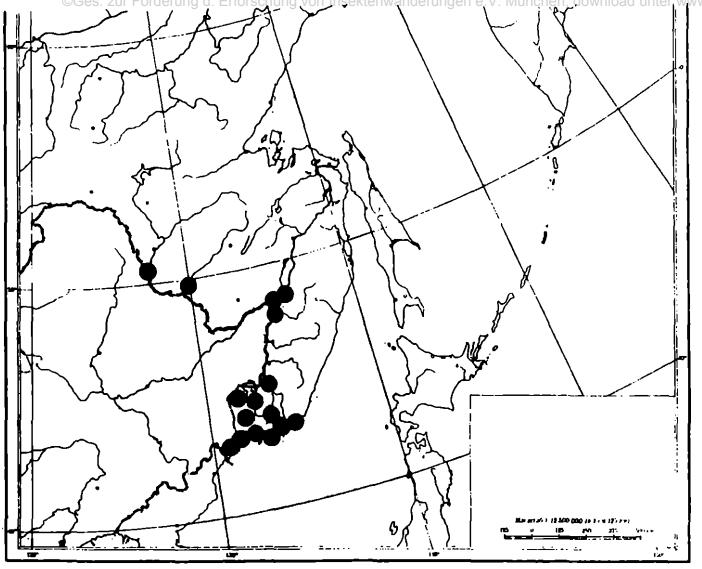
Map 12: *G. populifolia*



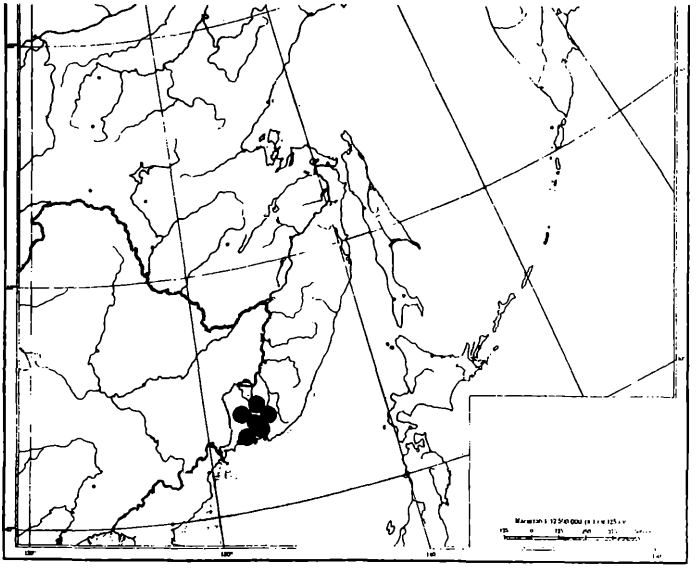
Map 13: *G. watanabei*



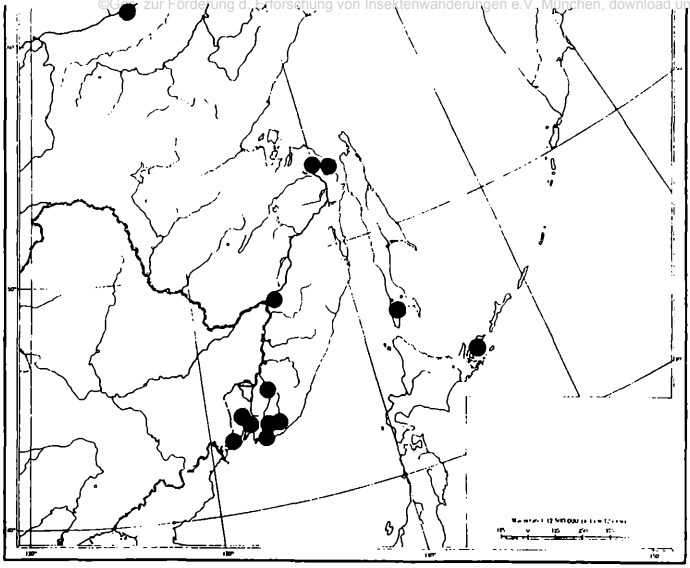
Map 14: *O. pruni*



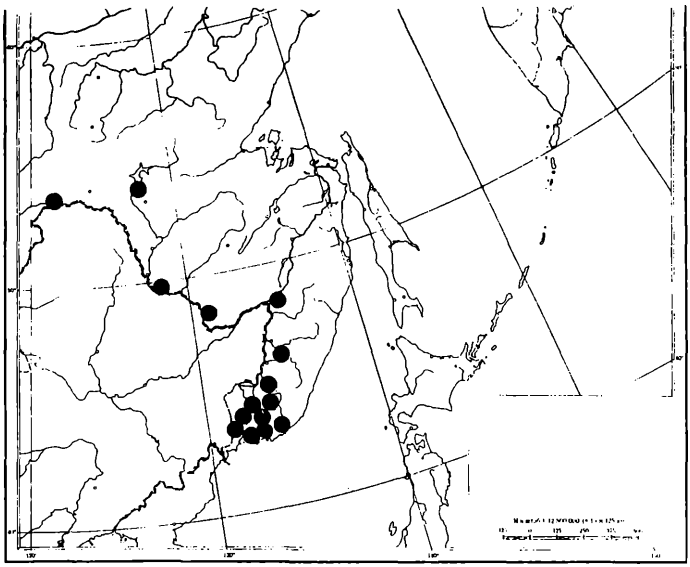
Map 15: *C. undans*



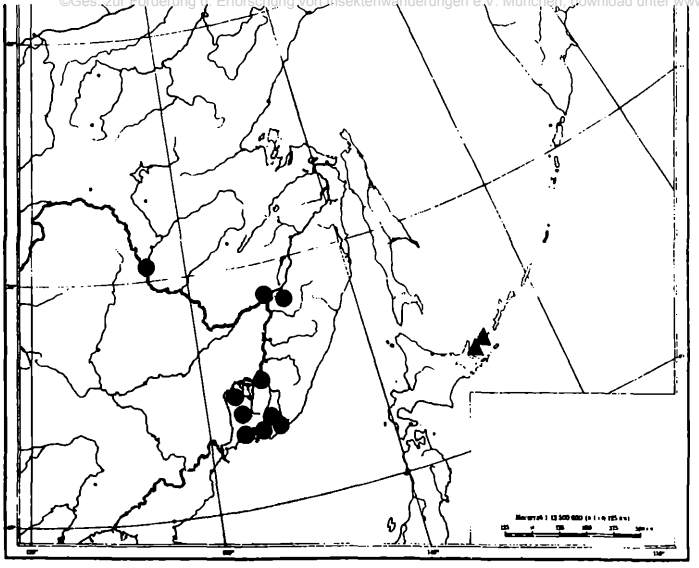
Map 16: *S. moltrechti*



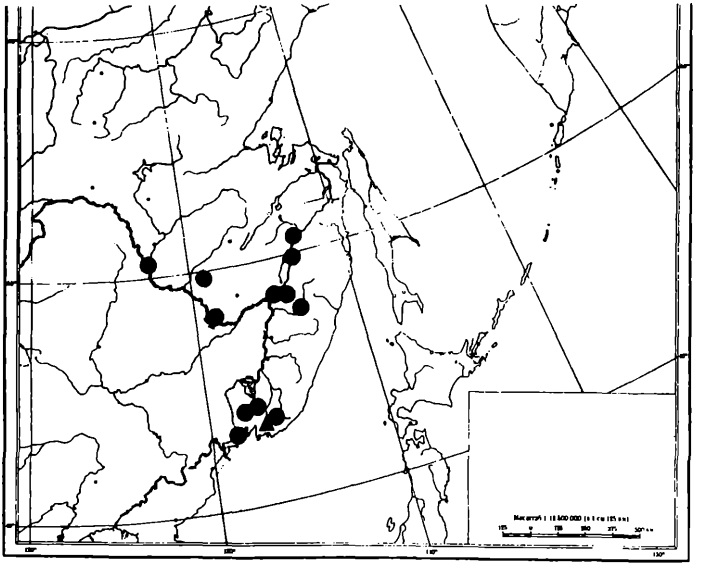
Map 17: *Ph. japonicum*



Map 18: *P. plagifera*



Map 19: *Bh. eximia* (●), *T. miyackei* (▲)



Map 20: *Bh. idiota* (●), *T. vishnu* (▲)

9c. *Euthrix potatoria bergmanni* BRYK, 1941

R (Map 5) Southern Sakhalin and Kuriles - Kunashir, Sikotan, Urup, Iturup.

10. *Euthrix albomaculata* BREMER, 1861

R (Map 6) Amur and Khabarovsk regions, Primorie.
FP Poaceae.
A VII-M VIII. Larvae of middle instars hibernate.

11. *Euthrix laeta sulphurea* AURIVILLIUS, 1894

R (Map 7) Primorie.
FP *Lespedeza*.
A E VII-VIII. Eggs hibernate.

12a. *Cosmotriche lunigera lunigera* ESPER, 1784

R (Map 9) Practically everywhere but local in coniferous forests and taiga.
FP *Abies, Larix*, occasionally *Pinus*.
A VI-VII (pupae hibernating) or VII-VIII (larvae hibernating).

12b. *Cosmotriche lunigera takamukuana* MATSUMURA, 1921

R (Map 9) Coniferous forests of Sakhalin.
FP *Abies, Larix.*
A VII-VIII. Larvae of middle instars hibernate.

13. *Gastropacha quercifolia cerridifolia* FELDER & FELDER, 1862

R (Map 8) In the Far East everywhere including Sakhalin.
FP *Salix, Rubus, Malus, Sorbus, Quercus, Berberis.*
A VII-M VIII. Larvae of middle instars hibernate.

14. *Gastropacha orientalis* SHELJUZHKO, 1943

R (Map 11) Amur region and Primorie.
FP Polyphagous on deciduous trees.
A VII-VIII. Larvae of middle instars hibernate.

15. *Gastropacha populifolia augustipennis* WALKER, 1855

R (Map 12) Continental part of the Far East.
FP *Populus, Salix.*
A E VI-B VIII. Larvae of middle instars hibernate.

16. *Gastropacha watanabei* OKANO, 1966

R (Map 13) South of Amur region and Primorie.
FP Polyphagous on deciduous trees.
A VII-M VIII. Larvae of middle instars hibernate.
C More common than *G. populifolia* and well separated from that in the absence of a tooth on the top of A1 on the forewings.

17. *Odonestis pruni rufescens* KARDAKOFF, 1928

R (Map 14) Amur region and Primorie.
FP *Prunus, Pyrus, Crataegus, Quercus, Tilia, Betula, Alnus, Ulmus, Salix.*
A VII-VIII. Larvae of middle instars hibernate.

18. *Cyclophragma undans fasciatella* MENETRIES, 1858

R (Map 15) Amur region and Primorie.
FP *Quercus, Tilia, Salix, Malus.* I collected caterpillars mainly on *Laspedeza.*
A E VIII-IX. Eggs hibernate.

19a. *Dendrolimus superans sibiricus* TSCHETVERIKOV, 1903

R (Map 10) Taiga and coniferous forests of continental Far East.
FP *Larix, Abies, Picea*, occasionally *Pinus.*
A VII-VIII. Larvae of various instars hibernate, sometimes twice.
C Very variable in colour and pattern. It is possible that the subspecific division given is somewhat artificial.

19b. *Dendrolimus superans jezoensis* MATSUMURA, 1917

R (Map 10) Sakhalin and Kuriles - Kunashir, Iturup.

20. *Syrastrenopsis moltrechti* GRÜNBERG, 1914

R (Map 16) Southern Primorie.
FP *Quercus.*
A E IX-X. Eggs hibernate.

21a. *Phyllodesma japonicum japonicum* LEECH, 1889

R (Map 17) Sakhalin and Kuriles - Kunashir.
FP *Salix, Betula, Quercus.*
A V. Pupae hibernate.
C *Ph. j. sakhalinensis* LAJONQUIERE is identical to the nominate subspecies from Japan.

21b. *Phyllodesma japonicum ussuriense* LAJONQUIERE, 1963 (= *Ph. j. amurensis* LAJONQUIERE, 1963).
R (Map 17) Local on continental Far East.
FP *Salix, Populus, Betula, Quercus, Lespedeza.*
A V. Pupae hibernate.

22. *Phyllodesma ilicifolium* LINNAEUS, 1758

Reliably known only from Central Jakutia (Mechino-Aldan).
FP *Vaccinium, Salix, Betula, Populus, Prunus, Genista, Quercus, Lathyrus.*
A V-M VI. Pupae hibernate.

23. *Paralebeda plagifera femorata* MENETRIES, 1858

R (Map 18) Amur region and Primorie.
FP *Malus, Prunus, Sorbus, Phellodendron, Quercus.*
A E VI-M VIII. Larvae of middle instars hibernate.

24. *Takanea miyackei miyackei* WILEMAN, 1915

R (Map 19) Kuriles - Kunashir.
FP Coniferous, possibly *Juniperus*.
A M VII-M VIII. Presumably larvae hibernate.
C It is quite possible that *T. m. yangtsei* LAJONQUIERE, described from Yunan, is a species of its own.

25. *Bhima eximia* OBERTHÜR, 1881

R (Map 19) Amur region and Primorie.
FP *Quercus, Carpinus.*
A E IX-M X. Eggs hibernate.

26. *Bhima idiota* GRAESER, 1888

R (Map 20) Amur region and Primorie.
FP *Populus, Padus.*
A E V-VII. Pupae hibernate.

27. *Streblote stupidum* STAUDINGER, 1887 (fig. 1)

R Southern Primorie. It was described from Vladivostok.
FP Unknown.
A B X (in two generations?).
C An extraordinary rare species which possibly vanished from the territory of Russia.

Streblote stupidum

Gonometinae (?)

28. *Trabala vishnu* LEFEBVRE, 1827

R (Map 20) South of Primorie (Anisimovka).
FP Rosaceae.
A VII.
C The species is known from two females with doubtful labels in a student's collection.

The pecularities of the genital structure clearly distinguish genus *Trabala* from Gastropachinae and Lasiocampinae, but the absence of material of the preimaginal stages makes it considerably difficult to place this genus correctly within the Lasiocampidae. Most probably it may be considered to Gonometinae, but additional evidence is absent.

Dendrolimus spectabilis BUTLER and *Bhima undulosa* WALKER, noted for Amur by COLLIER (1936), have not been found reliably in Russia yet and were therefore excluded from the list of Lasiocampidae of that territory.

References

COLLIER, W. A. (1936): Lepidopterorum Catalogus, Pars **73**. Lasiocampidae. – 's-Gravenhage, 484 pp.

GRAESER, L. (1888): Beiträge zur Kenntnis der Lepidopteren-Fauna des Amurlandes. – Berl. Entomol. Zeitschr. **32**:131-158.

KIRPICHNIKOVA, V. A. (1966): A hotbed of *Malacosoma neustrium* in Primorie. – Zastschita rastenij, No. **3**:51 (in russian).

KURENTZOV, A. I. (1938): Moths Macrolepidoptera as the pests of trees and bushes of Ussuri Region. – Trudy GTS AN SSSR **3**:107-210 (in russian).

TSCHISTJAKOV, JU. A. (1981): Ecologo-faunistic review of Lepidoptera of superfamilies Bombycoidea, Notodontoidea and some Noctuoidea of the Southern Primorie. – Novye svedenia o nasecomyh Dalnego Vostoka SSSR, Vladivostok, p. 86-101 (in russian).

TSCHISTJAKOV, JU. A. & E. A. BELJAEV (1984): Lappet-moths of genus *Gastropacha* OCHS. (Lepidoptera, Lasiocampidae) of the Far East of the USSR. – Systematica nasekomyh Dalnego Vostoka SSSR, Vladivostok, p. 56-67 (in russian).

ZOLOTUHIN, V. V. (1992): An annotated checklist of the Lasiocampidae of the Caucasus. – Atalanta **23**(1/2):225-243.

Address of the Author

VADIM V. ZOLOTUHIN
Department of Entomology
St.-Petersburg University
Universitetskaja 7/9
199034 St. Petersburg
Russia